

DRAWING STANDARDS CHECKLIST

Different people may have a variety of opinions regarding the content and information that should be provided on a drawing with a given title. In order to avoid confusion and to establish consistency, Drawing Standards Checklists have been prepared by the City. These checklists establish the minimum requirements for each drawing. The Staff may require additional drawings and/or detail, as it deems necessary in their sole discretion.

All drawings required for submittal shall conform to the drawing standards presented in this list. Checklists are provided in the order drawings should be collated and presented to the City.

Index of Checklists

Page Number	Checklist
2	Title Sheet
3	Notes Sheet
4	Phasing Plan
5	Site Plan
6	Grading/Drainage Plan
7	Utility Composite
8	Combined Street and Water Line Plan/Profile
10	Sanitary Sewer Plan/Profile
11	Storm Drainage Plan/Profile
12	Irrigation Plan
13	Parks/Landscaping Plan
14	Details Sheet
15	As-Built Grading/Drainage Plan
16	As-Built Combined Street and Water Plan/Profile
17	As-Built Sanitary Sewer Plan/Profile
18	As-Built Storm Drainage Plan/Profile
19	As-Built Irrigation Plan
20	As-Built Parks/Landscaping Plan

DRAWING STANDARDS CHECKLIST

TITLE SHEET

- ☐ Name of Project or Subdivision
- ☐ Developer/Owners Name and Contact Information
- ☐ Engineer/Designer Name and Contact Information
- ☐ Current Vicinity Map
- ☐ Index of Sheets
- ☐ Utility Notification Center of Colorado contact information
- ☐ List of Utility Contacts
- ☐ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

NOTES SHEET

- ❑ Project Notes for General, Water, Sanitary Sewer, Storm Sewer, Grading, Roadway
- ❑ List of Abbreviations
- ❑ Legend of all line types and symbols used throughout project drawings
- ❑ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

PHASING PLAN

- ☐ Lot and block layout
- ☐ Street names
- ☐ Lot numbers
- ☐ Phase lines and numbering
- ☐ Parks, open space, trails, detention/retention areas
- ☐ Utility phasing including end of line fire hydrants, sewer manholes, etc.
- ☐ Street phasing including temporary cul-de-sac locations
- ☐ Legend of symbols and line types used on this drawing
- ☐ Notes if applicable
- ☐ Scale
- ☐ North Arrow
- ☐ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ☐ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

SITE PLAN

- ☐ Site boundary including lot lines and dimensions, adjacent property lines, and adjacent property owners.
- ☐ Identify all existing and proposed easements, streets, and ROWs.
- ☐ Identify all existing and proposed utilities, including appurtenances (i.e. fire hydrants, manholes, etc)
- ☐ Identify all existing and proposed drainage and appurtenances (i.e. culverts, channels, etc.)
- ☐ Top and toe of slopes for retention/detention basins or other embankments
- ☐ Identify all paving, concrete walks, pads, ramps, and other surface treatments
- ☐ Identify all parking areas, striping, stalls, wheel chocks
- ☐ Identify parks, trails, opens space, etc.
- ☐ Identify all existing and proposed miscellaneous structures, fences, walls, septic facilities, etc.
- ☐ Do not show existing or proposed contours
- ☐ For perimeter streets, show roadway width from curb to curb or curb to edge of asphalt, ROW width, and section lines if applicable
- ☐ Identify all access points to adjacent properties within 200' of proposed access points.
- ☐ Identify building footprints, if applicable.
- ☐ Legend of symbols and line types applicable to this drawing
- ☐ North Arrow
- ☐ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ☐ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

GRADING/DRAINAGE PLAN

- ❑ Use site plan as a base drawing or otherwise provide similar information.
- ❑ Show all existing and proposed drainage facilities.
- ❑ Show all existing and proposed buried facilities that cross drainage facilities.
- ❑ Show and identify all encasement or structural pipe where applicable
- ❑ Station and label all manholes, inlets, and culverts. Provide rim and invert information if not provided elsewhere.
- ❑ Show existing and proposed surface contours with contour labels.
- ❑ Show 500 and 100-year flood and floodway boundaries, if applicable.
- ❑ Show flow direction with arrows and percent slope callouts.
- ❑ Show detention/retention facilities and cross sections with 5 year and 100 year high water surface elevations.
- ❑ Show outlet work details, if applicable.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

UTILITY COMPOSITE

- ❑ Use the site plan as a base drawing or otherwise provide similar information.
- ❑ Show and differentiate all proposed and existing utilities.
- ❑ Show all existing and proposed public and private utilities (i.e. sanitary, storm, water, gas, phone, power, CATV, etc.)
- ❑ Show all utility appurtenances (i.e. manholes, fire hydrants, water valves, etc.). Identify rim and invert information if not provided elsewhere.
- ❑ Show all water and sewer tap locations.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

COMBINED STREET AND WATER LINE PLAN/PROFILE

- ❑ Use the site plan as a base drawing or otherwise provide similar information.
- ❑ Segmentize plan view as required to provide profiles below plan views. Stationing on plan view shall align with stationing on profile.
- ❑ Show all existing and proposed profiles at C_L and right and left F_L s. Provide slopes with “+” or “-”.
- ❑ Cross sections may be required in addition to profiles, to review special circumstances or to evaluate situations where a road is being widened or where flowline grades differ from the centerline grade. If required, cross sections shall include: station, existing and proposed cross sections, existing and proposed ROWs and easements, cross slopes, and existing and proposed buried utilities.
- ❑ Show existing and proposed profiles at edge of pavement if there is no gutter.
- ❑ Note adjustment of all MH rims and valves and covers for final grade.
- ❑ Elevation of F_L at fillet/valley pan interface.
- ❑ Station & elevation of F_L PCs (BCRs), PTs (ECRs), and handicap ramps.
- ❑ Stationing of C_L PCs and PTs
- ❑ Station and elevation of pavement C_L and F_L VPIs, VPCs, VPTs, and high and low points.
- ❑ Station and elevation at all grade changes and C_L pavement warp at intersections.
- ❑ Provide pavement, base, and subgrade specifications.
- ❑ Barricades, turn-arounds, tapers, delineators, driveways.
- ❑ Streetlights, signing, and other traffic controls.
- ❑ Show future road extension alignment to support current design, where applicable.

- ❑ Show proposed permanent benchmark (for new subdivision) and all proposed horizontal control survey markers at street intersections.
- ❑ Show all existing and proposed water facilities and sizes in plan and profile.
- ❑ Show all existing and proposed buried facilities that cross water line.
- ❑ Dimension separation between water and other buried utilities (i.e. sanitary, storm, irrigation, etc.)
- ❑ Add water services to plan view and relate to C_L stationing.
- ❑ Station and label all water appurtenance locations (i.e. fire hydrants, valves, tees, crosses, plugs, bends, etc.)
- ❑ Show and identify encasement or structural pipe where applicable.
- ❑ Add existing and proposed surface profiles.
- ❑ Call out water pipe type in notes.
- ❑ Call out water minimum cover in notes. Dimension minimum cover on profile.
- ❑ Provide note regarding separation of sewer and water mains.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6' or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

SANITARY SEWER PLAN/PROFILE

- ☐ Use the site plan as a base drawing or otherwise provide similar information.
- ☐ Segmentize plan view as required to provide profiles below plan views. Stationing on plan view shall align with stationing on profile
- ☐ Show all existing and proposed sewer facilities and sizes in profile.
- ☐ Show all existing and proposed buried facilities that cross the sewer.
- ☐ Dimension separation between sewer and other buried facilities (i.e. water, storm, irrigation, etc.)
- ☐ Show and identify encasement or structural pipe where applicable.
- ☐ Add sewer services to plan view and relate to sewer line stationing.
- ☐ Station and label all manholes, add rim and invert elevations.
- ☐ Add sewer main slopes and distances between manholes (centerline to centerline).
- ☐ Add existing and proposed surface profile.
- ☐ Call out sewer pipe types in notes.
- ☐ Call out minimum cover over sewer in notes. If sewer is less than 8' from finished grade to top of pipe add note: "Lots served by shallow sewer".
- ☐ Provide note regarding separation of water and sewer mains.
- ☐ Provide note regarding service line markers and endpoint locations.
- ☐ Legend of symbols and line types applicable to this drawing
- ☐ North Arrow
- ☐ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6' or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ☐ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

STORM DRAINAGE PLAN/PROFILE

- ❑ Use the site plan as a base drawing or otherwise provide similar information.
- ❑ Segmentize plan view as required to provide profiles below plan views.
Stationing on plan view shall align with stationing on profile
- ❑ Show all existing and proposed drainage facilities in profile.
- ❑ Show all existing and proposed buried facilities that cross the drainage facilities.
- ❑ Dimension separation between storm drains and other buried facilities (i.e. water, sanitary, irrigation, etc.)
- ❑ Show and identify encasement or structural pipe where applicable.
- ❑ Station and label all manholes, inlets, culverts, add rim and invert elevations.
- ❑ Add storm drain slopes and distances between manholes and/or inlets (centerline to centerline).
- ❑ Add existing and proposed surface profile.
- ❑ Call out pipe and culvert types in notes.
- ❑ Call out minimum cover over pipes and culverts in notes.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6' or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

IRRIGATION PLAN

- ❑ Use the site plan as a base drawing or otherwise provide similar information.
- ❑ Show proposed surface contours.
- ❑ Call out minimum cover over irrigation lines.
- ❑ Identify irrigation head to head spacing and head and nozzle capabilities.
- ❑ Specify all irrigation system materials.
- ❑ Show existing and proposed ground, ditch, pipe, and/or flowline profile. Indicate all proposed covering or piping of existing ditches, as required.
- ❑ Identify existing and proposed irrigation facilities, including back flow preventors, pumps, timer locations, electrical services, and tap locations and sizes, if applicable.
- ❑ Identify existing and proposed utilities, drainage, and road crossings.
- ❑ Station and elevation of all manholes, standpipes, gates, and other appurtenances.
- ❑ Elevation of all existing and proposed pipe and ditch flowlines.
- ❑ Lengths and slopes of ditches and pipes.
- ❑ Show hydraulic gradeline, flows, velocities, and “n” values
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1”=10’, 1”=20’, 1”=30’, 1”=40’, 1”=50’, 1”=60’, or 1”=100’ horizontal and 1”=1’, 1”=2’, 1”=3’, 1”=4’, 1”=5’, 1”=6’, or 1”=10’ vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24” X 36”, landscape orientation.

DRAWING STANDARDS CHECKLIST

PARKS/LANDSCAPING PLAN

- ☐ Use the site plan as a base drawing or otherwise provide similar information.
- ☐ Identify areas to be covered with specific landscaping materials.
- ☐ Identify boulders, mounds, swales, water courses, rock outcroppings.
- ☐ Identify living planting material in a legend including: common and botanical names, quantities, minimum purchase sizes, mature height, ground cover/perennial material and spacing, types of soils, types of turf grasses, and other remarks.
- ☐ Specification of soil type and preparation.
- ☐ Landscaping irrigation layout, design, materials and details.
- ☐ Planting/staking and other details as required.
- ☐ Identify locations of parks equipment (i.e. benches, picnic tables, playground equipment, etc.)
- ☐ Identify parks equipment specifications in a legend.
- ☐ Location of maintenance building and pump houses, if applicable.
- ☐ Trail cross sections shall be included, if applicable.
- ☐ Calculation used to derive required landscaping.
- ☐ Location of overhead utilities if crossing proposed landscaped areas.
- ☐ Legend of symbols and line types applicable to this drawing
- ☐ North Arrow
- ☐ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ☐ Sheet size is 24" X 36", landscape orientation.

DRAWING STANDARDS CHECKLIST

DETAIL SHEET

- ☐ Separate detail sheet for water, sanitary, storm, roadway, and miscellaneous details.
- ☐ Use City provided details available in digital format.
- ☐ Roadway detail sheet to contain roadway cross-section profile as specified in soils report.
- ☐ Other details as required to appropriately construct project.
- ☐ Scale: As required.
- ☐ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT GRADING/DRAINAGE PLAN

- ☐ Use the grading and drainage plan as a base drawing.
- ☐ Show only newly constructed grading contours.
- ☐ Show all newly constructed drainage facilities.
- ☐ Show all newly constructed buried facilities that cross drainage facilities.
- ☐ Show all as-built locations for manholes, inlets, and culverts. Provide as-built rim and invert information if not provided elsewhere.
- ☐ Show as-built flow arrows and percent callouts.
- ☐ Provide as-built pad elevations for all lots that are in or are adjacent to the 100-year floodplain.
- ☐ Show detention/retention basin as-built contours and cross sections with slopes.
- ☐ Indicate volume verification of detention/retention and outlet works.
- ☐ Show drainage channel and swale as-built information, if applicable.
- ☐ Legend of symbols and line types applicable to this drawing
- ☐ North Arrow
- ☐ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ☐ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT COMBINED STREET AND WATER LINE PLAN/PROFILE

- ❑ Use the combined street and water line plan/profile and as base drawing.
- ❑ All vertical, horizontal, and other design information required for primary features on the street and water line plan/profile must have corresponding as-built information provided, including pavement width, curb/gutter/sidewalk width and type, base course, and pavement thickness, geosynthetics, sub-grade stabilization, elevations, horizontal control, valves, vaults, bends, tees, crosses, fire hydrants, and other appurtenances, etc.
- ❑ As-built information for all significant changes from the approved design plans.
- ❑ Provide elevations for all PC's, PT's, ECR's, angle points, grade breaks, and all locations where elevations were shown on the design drawing.
- ❑ End of service locations must be tied to lot corners or be located by station and offset.
- ❑ Pipe type and type of pipe connections (MJ, SJ, FL, etc.)
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6', or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT SANITARY SEWER PLAN/PROFILE

- ❑ Use the sanitary sewer plan/profile as a base drawing.
- ❑ All horizontal, vertical, and other design information required for primary features on the sewer plan and profile must have corresponding as-built information provided, including elevations, station and offset etc. for manholes, cleanouts and other appurtenances.
- ❑ Ends of services must be tied to lot corners or be located by station and offset. The top of the pipe or invert elevation or the depth from finished grade shall be shown.
- ❑ As-built information for all significant changes from the approved design plans.
- ❑ Pipe type shall be shown.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6', or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT STORM DRAINAGE PLAN/PROFILE

- ❑ Use the storm drainage plan/profile as a base drawing.
- ❑ All horizontal, vertical, and other design information required for primary features in the storm drainage plan and profile must have corresponding as-built information provided, including elevations, station and offset, pipe and culvert slopes and distances, basin structures, etc.
- ❑ As-built information for significant changes from the approved design plans.
- ❑ Pipe and culvert type.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6', or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT IRRIGATION PLAN (Only Required for City Facilities)

- ❑ Use the irrigation plan as a base drawing.
- ❑ All horizontal, vertical, and other design information required for primary features on the irrigation plan and profile must have corresponding as-built information provided.
- ❑ As-built information for all significant changes from the approved design plans.
- ❑ Pipe and culvert type.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' horizontal and 1"=1', 1"=2', 1"=3', 1"=4', 1"=5', 1"=6', or 1"=10' vertical, respectively and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation

DRAWING STANDARDS CHECKLIST

AS-BUILT PARKS/LANDSCAPING PLAN

- ❑ Use the Parks/Landscaping Plan as a base drawing.
- ❑ All horizontal, vertical, and other design information required for primary features on the irrigation plan and profile must have corresponding as-built information provided.
- ❑ As-built information for all significant changes from the approved design plans.
- ❑ Legend of symbols and line types applicable to this drawing
- ❑ North Arrow
- ❑ Scale must be 1"=10', 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', or 1"=100' and may necessitate more than one sheet depending on the size of the development or subdivision. Key map may be required if there are several match lines.
- ❑ Sheet size is 24" X 36", landscape orientation